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A NEW GENUS AND TWO NEW SPECIES OF PERCOID FISHES FROM NEW GUINEA, FAMILY CENTROPOMIDAE

By Leonard P. Schultz

Lt. James R. Simon, U.S.N.R., recently donated to the United States National Museum a small collection of fishes given to him by his friend Capt. Ralph F. Honess, U.S.A., who collected them in New Guinea in 1944. In this lot, totaling 27 specimens, were eight examples from fresh water that I consider to belong to an undescribed percoid genus involving two new species. These are described herein. The other 19 specimens are of known forms occurring in the region.

XENAMBASSIS, new genus

Genotype.—Xenambassis honessi, new species.

Body compressed, covered with cycloid scales of moderate size everywhere except on top of head; basal half of caudal fin scaled and a few scales on base of pectoral; lateral line arched over pectoral fin so that it is concurrent with dorsal profile, then extending along midaxis of body posteriorly; each lateral line tube straight, not extending entire length of scale; anterior profile concave over orbits; interorbital space a little convex; a low predorsal ridge extending along middorsal line ending at occiput; mouth terminal, a little oblique; premaxillary slightly protractile; maxillary without supplemental bone, mostly exposed, only the dorsal edge slipping slightly under edge of preorbital bone; maxillary with its posterior edge concave; jaws equal or nearly so, the lower slightly in front of upper; teeth in both jaws in a villiform band, with the outer row consisting of somewhat enlarged conical teeth, the band of teeth becoming narrower on sides of jaw, ending in only one or two rows on lower jaw; vomer with a patch of villiform teeth and palatines with a narrow row of villiform teeth; no teeth on

tongue; cheek and operculum scaled; posterior and lower margins of orbit denticulate and two denticulate ridges on preorbital bone above maxillary, the upper one forming part of the serrae around orbit; preoperculum with double edge, the outer one serrated on both posterior and ventral borders, the inner one serrated at lower angle and a little on each side of the angle above and forward; interoperculum denticulate; operculum not spinate; gill membranes united far forward, free from isthmus; branchiostegals 6; pseudobranchiae present; gill rakers of moderate length, of rather heavy build; a single dorsal fin with the spiny portion scarcely longer than soft portion of VIII or IX spines, the second or third longest, the next to the last shortest; spinous dorsal fin preceded by a short recumbent spine, directed forward, hidden in the skin beneath the scales; anal with 3 spines and usually 10 soft rays; both fins with a sheath of scales along their bases, one scale in width along dorsal and one or two along anal, these fins partly depressible between the sheath; pectorals ii, 13, asymmetrical, upper 2 or 3 branched rays longest; pelvic fins, I, 5, inserted under base of pectorals and a little in front of dorsal origin; pelvic spine slender, not reaching to anus and about two-thirds length of first branched pelvic ray, which ends in a short filament; axillary scale of pelvic small, about length of diameter of pupil; caudal fin forked, lobes more or less pointed.

Other characters are those of the genotype, *X. honessi*, described below.

This new genus is related to the percoid fishes usually referred to the family Centropomidae but sometimes separated from them and grouped in the family Ambassidae or Chandidae. *Xenambassis* is especially close to *Tetracentrum* Macleay, *Synechopterus* Norman, and *Ambassis* Cuvier and Valenciennes, differing from them as indicated in the accompanying key. *Ambassis* differs from the new genus and from *Tetracentrum* and *Synechopterus* by having the first dorsal fin made up of VII spines and joined to the base of the first spine of the second dorsal, whereas in the other three genera the first dorsal is joined at least halfway out the last spine so that the two fins are continuous. *Chanda* Buchanan-Hamilton, 1822, with *C. lala* as the type as restricted by Fowler (Proc. Acad. Nat. Sci. Philadelphia, 1905, p. 500) differs from the above-mentioned genera chiefly in having 14 to 17 soft rays in the anal fin. *Pseudoambassis* Castelnau, 1878 (=*Austrochanda* Whitley, 1935), a substitute name supposed by Whitley to be preoccupied by *Pseudambassis* Bleeker, 1876; and *Velambassis*, proposed by Whitley (Rec. South Australian Mus., vol. 5, No. 3, pp. 356–365, 1935), are here considered as subgenera of *Ambassis* Cuvier and Valenciennes. Indeed, they may even be synonyms of *Ambassis*, since the generic differences appear so slight. I also refer

Acanthoperca Castelnau, 1878, and *Blandowskiella* Iredale and Whitley, 1932, as subgenera of *Ambassis*. *Priopidichthys* Whitley, 1935, with teeth on the tongue, may well be a valid genus, as none of the other genera seem to have lingual teeth.

Named *Xenambassis*, meaning a strange or different *Ambassis*.

KEY TO THE GENERA AND SPECIES OF NEW GUINEA CENTROPOMIDAE RELATED TO TETRACENTRUM

1a. Anal rays IV, 9; dorsal rays IX, 10, dorsal fin continuous; preorbital with 2 serrated ridges; suborbital and postorbital ring of bones with denticulations; inner double edge of preopercular bone strongly toothed at angle and along its lower edge; outer edge of preoperculum strongly denticulate along its entire border; least depth of caudal peduncle 1⅔ in its length; profile concave over orbits; pelvics inserted under pectoral base; postorbital length of head 1.1 in length of caudal peduncle.

Tetracentrum[1] **apogonoides** (Macleay)

1b. Anal rays III, 8 to 11 (see table 1).

2a. Dorsal fin continuous, no deep notch in front of last spine, membrane between last two spines connected over halfway out last dorsal spine; second dorsal spine not reaching anywhere near base of last dorsal spine when fin is depressed.

3a. Orbital rim without serrae; profile over orbits convex; inner ridge of preoperculum with 1 or 2 serrae at angle; pelvics inserted just behind pectoral base; anal origin under next to last dorsal spine; least depth of caudal peduncle 1¾ in its length; postorbital length of head 1.3 in length of caudal peduncle; dorsal rays IX, 10; 14 gill rakers on lower half of first gill arch; pectoral with 14 rays.

Synechopterus caudovittatus Norman[2]

3b. Orbital rim denticulate; profile over orbits a little concave; inner ridge of preoperculum with lower and posterior sides near angle denticulate; pelvic insertion under pectoral fin base; anal origin under base of last dorsal spine or base of first soft dorsal ray.

4a. Dorsal rays VIII, 10 or 11; a blackish band along midaxis of body commencing behind head and becoming more intense on caudal peduncle, its width about equal to that of pupil, ending in a dark blotch at base of caudal fin_____ **Xenambassis honessi, new species**

4b. Dorsal rays IX, 10; midaxis of body with a narrow dark streak on caudal region not ending in a large dark blotch at base of caudal fin.

Xenambassis simoni, new species

2b. Dorsal fin deeply notched, first portion connected at base of first spine of second dorsal fin; dorsal rays VII–I, 8 to 14; second dorsal spine long, slender, when depressed its tip reaching past base of last dorsal spine.

Ambassis[3] Cuvier and Valenciennes

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[1] Whitley, 1935, proposed *Negambassis* to replace *Tetracentrum*, which he said was preoccupied by *Tetracentron* Brauer, 1865, but the spelling is not in conflict, according to opinions 147 and 148 of the International Commission on Zoological Nomenclature, and so *Tetracentrum* must stand as a valid name.

[2] Copeia, 1935, No. 2, pp. 61–63, fig. 1.

[3] For a key to the species of *Ambassis* see Weber and de Beaufort, Fishes of the Indo-Australian Archipelago, vol. 5, p. 398, 1929.

XENAMBASSIS HONESSI, new species

FIGURE 3

Holotype.—U.S.N.M. No. 122830, a specimen 87.6 mm. in standard length, collected in 1944 by Capt. Ralph F. Honess, U.S.A., in either the Samboga or the Girua River at Buna, New Guinea (long. 148° 30′ E.; lat. 8°45′ S.).

Paratypes.—U.S.N.M. No. 122831, 3 specimens, 77.5, 80.5, and 82 mm., collected along with the holotype and bearing same data; U.S.N.M. No. 121832, 2 specimens, 58 and 87.5 mm., bearing same data as holotype.

Description.—Detailed measurements were made, and these data, expressed in hundredths of the standard length, are recorded first for the holotype and then for two paratypes in parentheses, respectively. Standard lengths in millimeters 87.6 (82; 87.5).

TABLE 1.—*Counts recorded for certain species of Centropomidae from New Guinea*

Species	Number of fin rays							Number of scales					
	Dorsal			Anal		Pectoral		Lateral line			Above lateral line	Below lateral line	
	VIII, 10	VIII, 11	IX, 10	III, 10	IV, 9	ii, 12	ii, 13	30	31	32	4	7	8
Tetracentrum apogonoides	------	------	1	------	1	------	------	1	------	------	1	1	------
Synechopterus caudovittatus	------	------	1	1	------	1	------	------	------	1	1	1	------
Xenambassis honessi	1	5	------	6	------	------	11	3	3	------	6	5	1
Xenambassis simoni	------	------	2	2	------	------	4	1	1	------	2	1	1

Greatest depth of body 46.2 (45.1; 44.6); length of head 37.7 (37.8; 37.4); length of snout 9.25 (9.39; 10.2); diameter of eye 11.0 (11.3; 11.8); least width of interorbital space 9.82 (9.76; 9.02); length from tip of snout to rear tip of maxillary 13.7 (13.4; 14.7); postorbital length of head 18.3 (18.8; 17.7); least width of preorbital opposite tip of maxillary 2.28 (2.20; 2.28); least depth of caudal peduncle 14.4 (14.4; 13.7); length of caudal peduncle from base of last anal ray to midcaudal fin base 18.8 (18.7; 17.4); length of procumbent embedded spine at origin of dorsal fin 4.56 (4.27; 4.34); length of longest ray of pectoral fin 25.5 (27.1; 25.7); longest soft ray of pelvic fin to end of filament 25.7 (26.8; 25.1); length of pelvic spine 15.6 (16.5; 16.6); length of first dorsal spine 8.10 (6.95; 7.77); of second dorsal spine 19.6 (19.8; 18.3); of last dorsal spine 13.8 (14.5; 15.2) and next to last spine 13.5 (13.0; 13.2); longest soft ray of dorsal fin 20.5 (20.1; 21.7) and of anal fin 21.6 (22.0; —); length of first anal spine 8.56 (6.22; 8.34), of second 12.0 (12.8; 15.6), and of third anal spine 14.8 (14.0; 14.8); longest caudal fin ray 34.2 (33.5; 30.0); shortest midcaudal fin ray 16.8 (17.4; 16.1); length of longest gill raker on first gill arch 3.77 (4.27; 3.65);

distance from tip of snout to dorsal origin 46.8 (47.0; 47.4); snout to anal origin 65.0 (64.3; 65.7); snout to pectoral insertion 34.2 (36.8; 36.0); snout to pelvic insertion 39.0 (39.0; 41.5); snout to center of anus 57.6 (56.7; 52.1); center of anus to anal origin 7.65 (7.32; 8.00).

The following counts were made, respectively: Dorsal rays VIII, 11 (VIII, 10; VIII, 11; VIII, 11; VIII, 11; VIII, 11); anal rays III, 10 in all six specimens; pectoral rays ii, 13 in each side of all six specimens; pelvics always I, 5; gill rakers 6+1+13 in all the types; scales in lateral line 31 (30; 31; 31; 30; 30); scales above lateral line 4 (4; 4; 4; 4; 4) and below lateral line to anal origin 7 (7; 8; 7; 7; 7); zigzag scales around caudal peduncle 15 (16; 16; 16; 15; 16); branched rays of caudal fin always 8+7, totaling 15.

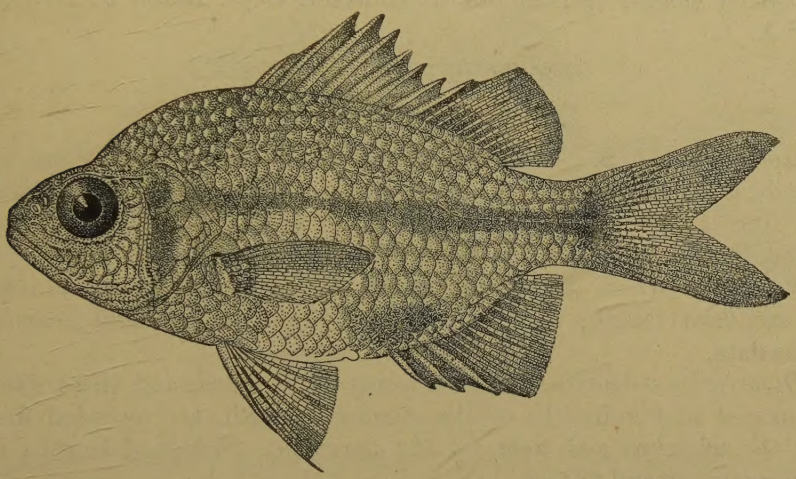

FIGURE 3.—*Xenambassis honessi*, new species: Holotype (U.S.N.M. No. 122830), standard length 87.6 mm. Drawn by Mrs. Aime M. Awl.

Depth of body about 2¼, head 2⅔, both in standard length; snout shorter than eye 3⅘ to 4, eye 3⅒ to 3⅕, both in length of head; interorbital about equal to snout; maxillary with its rear margin a little concave, not quite reaching to below middle of pupil; three series of scales on the cheek; dorsal origin over rear of base of pectoral fin; first dorsal spine short, second and third of nearly equal length, those following gradually shorter, the next to last spine shortest, about three-fourths length of last; anterior soft rays of both dorsal and anal fins longest, longer than any of the spines in the same fins; first anal spine about two-thirds length of second and third, the latter spine usually a trifle longer than the second; spines of dorsal fin about equal to postorbital length of head; pelvic spine a little shorter than postorbital length of head and the first soft ray a little produced, reaching about opposite the anal origin; pectoral fin nearly or quite reaching to opposite anal origin; vertebrae 10+17.

Coloration.—Generally brownish, with the center of each scale paler; a pale, broad, wedge-shaped blotch extends from in front of anus to pelvic base, upward to behind pectoral fin base; a blackish lateral band extends along midaxis of body, more intensely blackish posteriorly, ending in a black blotch at base of caudal fin; a dark blotch about size of eye or smaller occurs just dorsally to anterior base of anal fin; all fins dusky, the pigment more intense basally on interradial membranes of soft rays of each median fin; cheek pale; operculum with dusky blotch above and below, which are paler areas; peritoneum black.

Remarks.—This species may be separated from all related forms by the foregoing key.

Named *honessi* in honor of its collector, Capt. Ralph F. Honess, U.S.A.

XENAMBASSIS SIMONI, new species

FIGURE 4

Holotype.—U. S. N. M. No. 122828, a male specimen 80 mm. in standard length, collected in either the Samboga or the Girua River at Buna (long. 148°30′ E., lat. 8°45′ S.), New Guinea, by Capt. Ralph F. Honess, U.S.A., in 1944.

Paratype.—U. S. N. M. No. 122829, a female specimen, 68.5 mm. in standard length, taken along with the holotype and bearing same data.

Description.—Detailed measurements were made, and these data, expressed in hundredths of the standard length, are recorded first for the holotype and then for the paratype. Standard lengths in millimeters 80 and 68.5.

Greatest depth of body 45.6 and 48.8; length of head 36.9 and 40.7; length of snout 9.25 and 9.78; diameter of eye 10.9 and 13.0; least width of interorbital space 9.38 and 10.4; length from tip of snout to rear tip of maxillary 13.5 and 14.2; postorbital length of head 17.4 and 19.9; least width of preorbital opposite tip of maxillary 2.00 and 2.34; least depth of caudal peduncle 15.1 and 15.0; length of caudal peduncle from base of last anal ray to midcaudal fin base 17.3 and 18.7; length of embedded procumbent dorsal spine at dorsal origin 4.25 and 3.94; length of longest ray of pectoral fin 25.3 and 24.8; longest soft ray of pelvic fin to end of filament 27.1 and 26.7; length of pelvic spine 16.2 and 17.4; length of first dorsal spine 8.50 and 7.44; of second dorsal spine 19.2 and 21.3; of last dorsal spine 14.4 and 11.5; of next to last dorsal spine 14.1 and 11.5; longest soft ray of dorsal fin 19.5 and 19.0; of anal fin 20.0 and 20.3; length of first anal spine 8.50 and 7.88; of second 13.3 and 14.9; of third anal spine 14.4 and 14.6; longest caudal fin ray 33.1 and 34.0; shortest midcaudal fin ray 16.2 and 16.3; length of longest gill raker on first

gill arch 3.13 and 3.65; distance from snout tip to dorsal origin 44.4 and 49.6; snout to anal origin 64.0 and 64.8; snout to pectoral insertion 33.8 and 37.7; snout to pelvic insertion 39.3 and 43.0; snout to center of anus 56.8 and 58.8; center of anus to anal origin 7.62 and 5.55.

The following counts were made, respectively: Dorsal rays IX, 10 and IX, 10; anal rays III, 10 and III, 10; pectoral rays ii, 13–ii, 13 and ii, 13–ii, 13; pelvics always I, 5; gill rakers on first arch 6+1+13 and 6+1+13; scales 30 and 31; scales above lateral line 4 and 4, and below lateral line 7 and 8; zigzag scales around caudal peduncle 15 and 16; branched caudal fin rays 8+7 and 8+7.

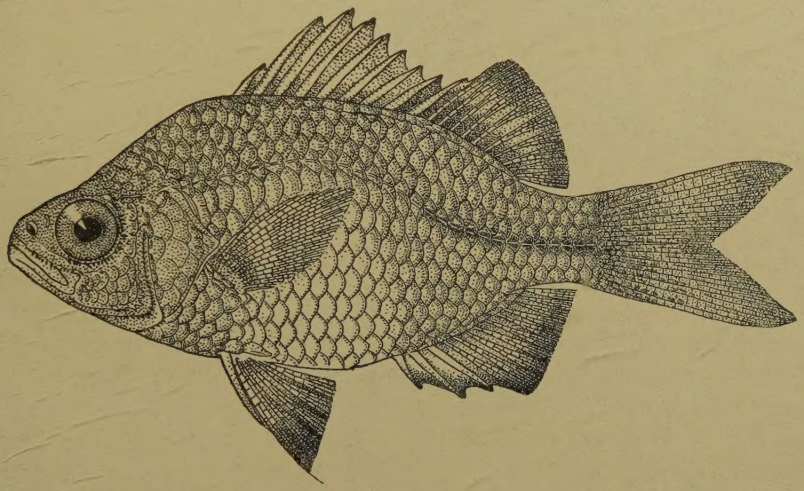

FIGURE 4.—*Xenambassis simoni*, new species: Holotype (U.S.N.M. No. 122828), standard length 80 mm. Drawn by Mrs. Aime M. Awl.

The shape of the body, length of fins, and other characteristics except certain counts and coloration are so similar to *X. honessi* that it is not deemed necessary to repeat them here, since detailed measurements are given above.

Coloration.—General coloration light brownish with centers of scales paler; lateral line blackish on caudal region but no black blotch at base of caudal fin; area behind pectoral and above pelvic fins pale to midaxis of body; median fins dusky, more intensely pigmented on interradial membranes basally; paired fins light dusky, pelvics darker distally; peritoneum black.

Remarks.—This new species may be distinguished from closely related forms by the foregoing key.

Named *simoni* in honor of Lt. James R. Simon, U.S.N.R., formerly of the Wyoming Game and Fish Commission, who donated the specimens collected by Captain Honess to the National Museum.

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